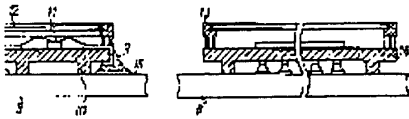


PATENT ABSTRACTS OF JAPAN



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(21)Application number : 05-270517 (71)Applicant : RICOH CO LTD
(22)Date of filing : 28.10.1993 (72)Inventor : OUE YUJI

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(57)Abstract:

PURPOSE: To improve assembly position precision and to prevent the intrusion of external unnecessary light by precisely positioning a CCD sensor IC package on a substrate through the use of a self alignment operation at the time of reflow soldering.

CONSTITUTION: Plural projections 10 are provided at the bottom of the lower ceramic case 14 of CCD sensor IC 7, and multiple connection electrodes 9 are provided from the side of the case 14 to the bottom. The respective projections 10 hold height from the upper surface of the substrate 8 of sensor IC 7 to a prescribed value. Consequently, IC 7 is set on the upper surface of the substrate 8 and soldering is executed by a reflow soldering method. Thus, the self alignment operation at the time of reflow soldering between the electrode 9 and a corresponding soldering pad 15 is used and the loading of IC 7 with high fitting position precision can be realized.

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